

BOOK REVIEWS

DEFENCE FROM FLOODS AND FLOODPLAIN MANAGEMENT edited by John Gardiner, Ödön Starosolszky and Vujica Yevjevich, Kluwer Academic Publishers, Dordrecht, 1995, NATO ASI Series E: Vol. 299. No. of pages: xii+568. Price: £178.00 (hb). ISBN 0792337050.

This publication presents the proceedings of the NATO Advanced Study Institute meeting held in Budapest in April 1994. This was an extension of an earlier conference held in Sicily in 1992, entitled *Coping with floods*. The editorial describes the focus of the first meeting as 'the hydrological and hydraulic characteristics of floods together with flood forecasting and warnings,' and the aim of the second as '... moving towards the overall social, economic and ecological aspects of floodplain management and achieving sustainability through integrated approaches' in order to 'reveal the many aspects of a more holistic approach to the management of flood risk.' Unfortunately, the 32 papers fall far short of these objectives. An unusual feature of the proceedings is an index which appears to be based solely on the key words of the titles of contributions. 'Sustainability' and 'sustainable development' each have one entry (both from papers by the senior editor) and 'social' and 'environment' are totally absent! Perhaps the fault lies with the title; 'defence' carries a strong connotation of structural protection. The light editorial hand is apparent in the alternative spellings of 'defence' and 'defense' which are used indiscriminately with both appearing in the index!

All would agree that integrated studies of flood management stemmed from the seminal work of Gilbert White. This holistic approach has remained the focus for flood researchers in the English-speaking world. This is evident in some contributions to these proceedings, especially in the papers by Thomas and Platt who provide short but insightful reviews and lessons from their long experience of floodplain management in the USA. Among the lessons are the need for national goal setting; the suggestion to reduce by one-half the flood losses to human and natural resources; and the idea that floodplain management should be integrated with multi-hazard risk and integrated emergency management systems. These topics are singularly lacking in the contributions from authors based in mainland Europe.

The volume is divided into three sections, namely 'defence from floods,' 'floodplain management' and 'ecology and social aspects.' Floodplain management comprises 13 papers dominated by technical articles such as the three devoted to studies of the soil mechanics of levees. Perhaps the most intriguing is an overview of flood defence activities in Hungary by Toth. It was a surprise to the reviewer to learn

that there are 2940km of levees on the Tisza Valley ('defending' 2.5 million people), double the length of flood prevention works in The Netherlands. The recommended high priority research and development needs, however, are all hydrological in nature. The section on floodplain management contains 12 papers of which four describe activities in the USA. It is interesting to compare the assertion of Dotson, of the US Army Corps of Engineers, 'that Federal reservoirs more than offset the negative results on unprotected areas in the St Louis area caused by Federal levees' with the views of Platt that the failure of about 10000km of rural levees probably saved the flood walls that protect Kansas City and St Louis from overtopping. In the Mississippi Valley the current debate is whether to restore the prodigious length of rural levees or to restore former wetlands in order to enhance upstream flood storage. It would seem that such questions have yet to appear on the agendas in Europe.

The eight papers that make up the third section are the most disappointing; few attempt to deal with the ecological and social aspects of flood defences. Two, interesting in their own right, describe coastal erosion hazard in the USA and water quality issues in The Netherlands. One of the few papers to attempt to include a social dimension, '*Public perception of flood risk and flood defence policies*', is by Corria *et al.* from Portugal. This is noteworthy because, firstly, one of the conclusions stresses the importance of the role that the public plays in floodplain management, and secondly, it appears to list the only reference to the research undertaken over the last 25 years or so by the Flood Hazard Research Centre at Middlesex University. One would have thought that the Euroflood project studies from the Centre would have been more prominent.

Viewed from the antipodes, the European approach to floodplain management is still dominated by technical studies in hydrology and hydraulics with an emphasis on structural solutions. The role of people is hardly mentioned and, despite valiant efforts in the two papers by editor Gardiner, the impact of flood defences on ecology and sustainability is still to be addressed. It is difficult to recommend that researchers or public libraries purchase this book (which has a cost in excess of \$A400 in the southern hemisphere). Finally, it would have been expected that the editorial introduction, or at the very least one paper, would have mentioned the United Nations International Decade for Natural Disaster Reduction, which had reached its mid-point at the time of the meeting in Budapest.

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